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TONY SUN

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SUMMARY

- Excellent verbal and written communication skills. Effective in communicating technical materials.
- Excellent analytical/organizational/leadership skills. Experienced network system researcher/developer.
- Superb public speaking/presentation skills. Dedicated, sensible and thorough. Effective working in teams.
- U.S Citizenship. Equally fluent and proficient in English and Chinese. Well-traveled. Willing to relocate.

EDUCATION

- PhD Computer Science** **June 2006**
University of California Los Angeles
Dissertation: "Enabling Ubiquitous Data Services in Heterogeneous Wireless Networks"
Advisor: Dr. Mario Gerla, Major and Minor GPA: 3.95/4.00
- M.S. Computer Science** **Jan 2003**
University of California Los Angeles
Advisor: Dr. Mario Gerla
- B.S. Computer Science and Engineering with Honors** **June 2001**
University of California Los Angeles

WORK EXPERIENCE

- Tianjin University, China –Visiting Professor** **July06-Oct06**
 - Lectured two graduate level courses (Computer Networking and Network Security).
 - Held regular seminars at Tianjin University CS Department. Advised various research efforts.
- UCLA Network Research Lab- Research Assistant** **Mar03-June06**
 - Led various research and development efforts on wireless multimedia/data services, including:
 - * ZigBee wireless mesh solution for home/factory automation/control.
 - * Seamless vertical handoff solution that ensures uninterrupted wireless content services.
 - * Accurate capacity estimation techniques that allows more efficient data services to wireless users.
 - Designed/Implemented the following schemes/tools/demos:
 - * Wireless DTN storage overlay system. Accurate capacity estimation in multi-hop wireless networks.
 - * Seamless vertical handoff solution for uninterrupted wireless content delivery.
 - * Video/audio streaming between wireless AdHoc network and the Internet.
 - * ZigBee/IEEE 802.15.4 standards and related enhancements on embedded devices.
 - * Accurate capacity estimation on asymmetric links and high speed links.
 - Advised/guided numerous graduate and undergraduate students with their research. Individually supervised 10 graduate students with their Master project, and 6 undergraduates with their individual research class.
- Northrop Grumman – Software Engineer** **Oct02-Sept03**
 - Developed/implemented portions of an aerial mission planning system.
 - Co-developed/Implemented a Change Management (CM) process for the division.
 - Recruited/Referred six full-time software engineers to the mission system department.
- Northrop Grumman –Software Engineering Intern** **July02-Oct02**
 - Evaluated existing software product, provided feedbacks and suggestions to management.
 - Led comparative evaluations of software development environments, automated testing tools, and version control software. Suggestion resulted in a group wide adaptation of the recommended tools.
- UCLA File Mobility Group-Undergraduate Research Assistant** **Oct00-March01**
 - Investigated the behaviors of RIP and BGP routers. Studied various approaches on DDOS preventions.
- Cisco Systems- ELB Catalyst 6000 Enterprise Switches-Software Intern** **July00-Oct00**
 - Investigated the intricacies of SCSI over IP, Fiber Channels, and other related SAN strategies.
 - Worked with the creator of *ISCSI* protocol to design, expand, and developed an *ISCSI* testing program to verify the correctness of the *ISCSI* protocol.
- Web Consulting** **July99-Oct 99**
 - Worked closely with marketing management to define/design/setup the company website for Galvantech¹ and Warpcom². ¹ Galvantech Inc. and ² WarpCom Technologies both merged with Cypress Semiconductor.
- WarpCom Technologies-Hardware Engineering Intern** **June98-Oct 98**
 - Worked on OrCAD schematics and PCB board layouts for an 8-port 10/100 Ethernet switch.
 - Worked to verified the correctness of an 8-port 10/100 auto-sensing Ethernet switch controller.

TECHNICAL SKILLS	<ul style="list-style-type: none"> ▪ Excellent understanding of various wired/wireless network technologies at all layers. ▪ Excellent programming skills in C/C++, C#, Perl, ASP, XML, PHP, HTML, Java on Linux/Unix/Windows Platforms. Solid experience with NS2 and Qualnet network simulators. ▪ Solid with in 802.11a/b/g (Wifi), 802.15.1(Bluetooth), 802.15.3(UWB), 802.15.4(ZigBee), 802.16(WiMax). ▪ Knowledgeable of programming and debugging embedded devices (wireless motes). ▪ Excellent in preparing and presenting technical materials. Published over 30+ technical articles.
TEACHING/ LEADERSHIP EXPERIENCE	<p>Tianjin University –Visiting Professor</p> <ul style="list-style-type: none"> ▪ Lectured two graduate level courses: <i>Computer Networks</i> (40 Hours) and <i>Network Security</i> (40 Hours). ▪ Prepared lectures and planned various course logistics. Concurrently managed four Teaching Assistants. <p>UCLA Computer Science Department -Master Project/Undergraduate Research Mentor</p> <ul style="list-style-type: none"> ▪ Advised/guided Master’s projects. Served as research mentor to various undergraduates. ▪ Coordinated weekly meetings to discuss/monitor project progress and directions (Fall03-Spring06) ▪ Supervised a total of 10 Master Students with their Master comprehensive projects, ▪ Advised/guided a total of 6 undergraduate students through their individual research class. <p>UCLA Computer Science Department - Course Project Mentor</p> <ul style="list-style-type: none"> ▪ Project mentor for <i>CS218-Advanced Computer Networks</i> (Fall03,04,05). ▪ Advised and guided 7 project teams (2-3 person teams) with their research, coordinated weekly meetings to monitor team progress, advised on project approach and suggest project direction. <p>UCLA Computer Science Department -Teaching Associate/Fellow</p> <ul style="list-style-type: none"> ▪ Head TA of CSM152B- <i>Digital Design Laboratory</i> (Fall03-Winter05). ▪ Led discussion sessions and lecture, prepared course agenda/syllabus, coordinated and created projects/midterms, graded projects/midterms, held office hours, coordinated efforts between different class sections, trained new Teaching Assistants, and provided documentation for course accreditation. <p>Department of Computer Science and Mathematics, UCLA- Teaching Assistant</p> <ul style="list-style-type: none"> ▪ CS130-<i>Software Engineering</i> (Winter02), PIC60- <i>Data Structures and Algorithms</i> (Winter03), CSM152B- <i>Digital Design Laboratory</i> (Spring03). ▪ Prepare weekly discussion material and agenda, led class discussion, held office hours, graded and prepared homework/projects/exams, worked closely with instructor to coordinate discussion materials. <p>UCLA Computer Science Department- Course Reader</p> <ul style="list-style-type: none"> ▪ CS111- <i>Operating System</i> (Spring01), CS143- <i>Database Management</i> (Spring02), CS180- <i>Algorithm and Complexity</i> (Spring02). ▪ Discussed homework solutions with instructor & teaching assistants. Graded homework/projects.
HONORS/ AWARDS	<ul style="list-style-type: none"> ▪ Graduate Student Assistantship, <i>UCLA</i>, 2002-2006 ▪ USENIX MobiSys Stipend Award, <i>USENIX</i>, 2005 ▪ Computer Science Department (CSD) Research Review First Place Poster Award, <i>UCLA</i>, 2004 ▪ Dean’s Honor List, <i>UCLA</i>, 1997-2001 ▪ Paul Lane Scholarship, <i>UCLA</i>, 2001 ▪ Altera University Scholarship, <i>UCLA</i>, 2000 ▪ Eugene Birnbaum Scholarship, <i>UCLA</i>, 2000 ▪ Taxaco Scholarship, <i>UCLA</i>, 2000 ▪ Audrey & James Gilstrap Scholarship, <i>UCLA</i>, 1999 ▪ Audrey & James Gilstrap Scholarship, <i>UCLA</i>, 1998 ▪ Class Valedictorian, <i>Piedmont Hills High School</i>, 1997
SELECTED PUBLICATION	<p>Journal and Book Chapter</p> <ul style="list-style-type: none"> ▪ Ling-Jyh Chen, Tony Sun, Guang Yang, M. Y. Sanadidi, and Mario Gerla. <i>AdHoc Probe: End to end Capacity Probing in Ad Hoc Networks</i>. To appear in <i>Wireless Networks (WINET)</i>, Springer. ▪ Guang Yang, Ling-Jyh Chen, Tony Sun, Mario Gerla, and M. Y. Sanadidi. <i>Smooth and Efficient Real-time Video Transport in Presence of Wireless Errors</i>. Accepted by <i>ACM Transactions on Multimedia Computing, Communications and Applications (ACM TOMCCAP)</i>. ▪ Ling-Jyh Chen, Tony Sun, Guang Yang, M. Y. Sanadidi, and Mario Gerla. <i>Monitoring Access Link Capacity Using TFRC Probe</i>. Accepted by the <i>Computer Communications Journal (ComCom)</i>, Special Issue on Monitoring and Measurements of IP Networks. ▪ Mario Gerla, Ling-Jyh Chen, Tony Sun, and Guang Yang. <i>Ubiquitous Video Streaming: A System Perspective</i>. <i>Advances in Pervasive Computing and Networking</i> (ISBN: 0387230424), pp 197-212, B. Szymanski and B. Yener (Eds.), Springer, 2005.

Conference Paper

- Tony Sun, Ling-Jyh Chen, Nia-Chiang Liang, Ping-Chieh Chen, and Mario Gerla. *Evaluating Mobility Support ZigBee Network*. In submission.
- Ling-Jyh Chen, Tony Sun, and Yung-Chih Chen. *Improving Bluetooth EDR Data Throughput Using FEC and Interleaving*. The Second International Conference on Mobile Ad Hoc and Sensor Networks (MSN'06), Hong Kong, 2006.
- Guang Yang, Ling-Jyh Chen, Tony Sun, Biao Zhou, and Mario Gerla. *Ad-hoc Storage Overlay System (ASOS): A Delay-Tolerant Approach in MANETs*. The Third IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS'06), Vancouver, Canada, 2006.
- Nia-Chiang Liang, Ping-Chieh Chen, Tony Sun, Guang Yang, Ling-Jyh Chen, and Mario Gerla. *Impact of Node Heterogeneity in ZigBee Mesh Network Routing*. The 2006 IEEE International Conference on Systems, Man, and Cybernetics (SMC'06), Taipei, Taiwan, 2006.
- Ling-Jyh Chen, Chen-Hung Yu, Tony Sun, Yung-Chih Chen, and Hao-hua Chu. *A Hybrid Routing Approach for Opportunistic Networks*. The 2006 ACM SIGCOMM Workshop on Challenged Networks (CHANTS'06), Pisa, Italy, 2006.
- Ling-Jyh Chen, Tony Sun, Li Lao, Guang Yang, M. Y. Sanadidi, and Mario Gerla. *Estimating Link Capacity in High Speed Networks*. IFIP Networking 2006, Coimbra, Portugal, 2006.
- Tony Sun, Ling-Jyh Chen, Chih-Chieh Han, Guang Yang, Mario Gerla. *Path Capacity Estimation in IEEE 802.15.4 Enabled Wireless Sensor Network via SenProbe*. Demo Paper. The 2006 IEEE Consumer Communications and Networking Conference, Las Vegas, USA, 2006.
- Tony Sun, Ling-Jyh Chen, Chih-Chieh Han, Guang Yang, and Mario Gerla. *Measuring Effective Capacity of IEEE 802.15.4 Beaconless Mode*. IEEE Wireless Communications and Networking Conference 2006 (WCNC'06), Las Vegas, USA, 2006.
- Tony Sun, Ling-Jyh Chen, Guang Yang, M. Y. Sanadidi, and Mario Gerla. *SenProbe: Path Capacity Estimation in Wireless Sensor Networks*. The Third International Workshop on Measurement, Modelling, and Performance Analysis of Wireless Sensor Networks (SenMetrics'05, in conjunction with MobiQuitous'05), San Diego, USA, 2005.
- Tony Sun, Guang Yang, Ling-Jyh Chen, M. Y. Sanadidi, and Mario Gerla. *A Measurement Study of Path Capacity in 802.11b based Wireless Networks*. The Wireless Traffic Measurements and Modeling Workshop (WiTMeMo'05, in conjunction with MobiSys'05), Seattle, USA, 2005.
- Ling-Jyh Chen, Tony Sun, Guang Yang, M. Y. Sanadidi, and Mario Gerla. *AdHoc Probe: Path Capacity Probing in Wireless Ad Hoc Networks*. The first IEEE International Conference on Wireless Internet (WICON'05), Budapest, Hungary, 2005.
- Guang Yang, Ling-Jyh Chen, Tony Sun, Mario Gerla, and M. Y. Sanadidi. *Real-time Streaming over Wireless Links: A Comparative Study*. The 10th IEEE Symposium on Computers and Communications (ISCC'05), Cartagena, Spain, 2005.
- Ling-Jyh Chen, Tony Sun, Guang Yang, M. Y. Sanadidi, and Mario Gerla. *End-to-end Asymmetric Link Capacity Estimation*. IFIP Networking 2005, Waterloo, Ontario, Canada, 2005.
- Tony Sun, Ling-Jyh Chen, Chih-Chieh Han, and Mario Gerla. *Reliable Sensor Networks for Planet Exploration*. The 2005 IEEE International Conference on Networking, Sensing and Control (ICNSC'05), Tucson, USA, 2005.
- Ling-Jyh Chen, Tony Sun, Benny Chen, Venkatesh Rajendran, and Mario Gerla. *A Smart Decision Model for Vertical Handoff*. The 4th ANWIRE International Workshop on Wireless Internet and Reconfigurability (ANWIRE'04, in conjunction with IFIP Networking'04), Athens, Greece, 2004.
- Ling-Jyh Chen, Tony Sun, M. Y. Sanadidi, and Mario Gerla. *Improving Wireless Link Throughput via Interleaved FEC*. The Ninth IEEE Symposium on Computers and Communications (ISCC'04), Alexandria, Egypt, 2004.

OTHER INTERESTS

- Traveling, Triathlon, Windsurfing, Racquetball, Badminton, Backpacking, Sailing, Tennis, Surfing, Golf, Kayaking, Bowling, Piano, Violin, Chess/Go.

REFERENCES

- Professor Mario Gerla (gerla@cs.ucla.edu)
- More references available upon request

FULL RESUME

- <http://www.cs.ucla.edu/~tonysun/resume/Resume1-0.pdf>